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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/756,503	01/08/2001	Essam Sourour	4015-863	5587
24112	7590	02/23/2006	EXAMINER	
COATS & BENNETT, PLLC P O BOX 5 RALEIGH, NC 27602			WONG, BLANCHE	
			ART UNIT	PAPER NUMBER
			2667	

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	09/756,503		SOUROUR ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Blanche Wong		2667	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 November 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. The allowability of claims 19-23 has been withdrawn. Examiner apologizes for any inconvenience.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 1-23** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Cl. 9, ln. 5, "said a" should read as – said – only.
- Cl. 10, ln. 8, whether it is the same as cl. 1, ln. 5.
- Cl. 15, ln. 3, whether "a predetermined threshold Doppler frequency" is the same predetermined threshold Doppler frequency in cl. 13, ln. 3
- Cl. 17 and 18, it is improper to use double bracketing for deletion of claim language.

4. There is insufficient antecedent basis for this limitation in the claim.

Cl. 1 recites the limitation "the mobility" in ln. 5.

Cl. 19 recites the following limitations: ln. 8, "the demand", ln. 9, "the number", ln.

11, "the mobility of said user".

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1,10,19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallentin et al. (U.S. Pat No. 6,347,091) in view of Kim et al. (U.S. Pat No. 6,512,753).

With regard to cl. 1 and 19, Wallentin discloses

determining the mobility (mobility management, col. 15, ln. 21) of a user of said CDMA communications network; and

assigning said user a spreading code selected (selects the optimal connection, col. 15, ln. 21) from one of said preferred group of spreading codes and said non-preferred group of spreading codes based on (radio channel resources are optimally utilized, col. 15, ln. 24) said user's mobility.

However, Wallentin fails to explicitly show establishing a preferred group of spreading codes and a non-preferred group of spreading codes, as recited in cl. 1 and 19.

In an analogous art (spreading channels in a CDMA communications system, col. 1, ln. 10), Kim discloses establishing a preferred group of spreading codes (Walsh orthogonal code, col. 4, ln. 19) and a non-preferred group of spreading codes (quasi-orthogonal code, col. 4, ln. 19).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include establishing a preferred group of spreading codes and a non-

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preferred group of spreading codes. The suggestion/motivation for doing so would have been to enable two users having different spreading rates to use the same spreading codes. Kim, col. 8, ln. 55-57. (See also CDMA systems increases channel capacity by using spread spectrum, Sourour (U.S. Pat No. 6,973,063), col. 2, ln. 28-20) Therefore, it would have been obvious to combine Kim with Wallentin for the benefit of a spreading device for a CDMA communication system that enables two users having different spreading rates to use the same spreading codes, to obtain the invention as specified in cl. 1 and 19.

With regard to cl. 10, Wallentin discloses a base station in a CDMA communications network comprising: (in Fig. 2)

a base transceiver system 23 (BS base station) comprising at least one transceiver (arrow between 23 and 30) for communicating with mobile terminals 30 (mobile station); and

a base station controller 22 (BSC base station controller) to assign spreading codes (CDMA spreading codes, col. 15, ln. 23) to users of said CDMA communications network, wherein said base station controller is operative to determine the mobility (mobility management, col. 15, ln. 21) of users of said CDMA communications network, and to assign a spreading code selected (selects the optimal connection, col. 15, ln. 21) from at least one of said preferred and non-preferred groups of spreading codes to at least one of said users based on (radio channel resources are optimally utilized, col. 15, ln. 24) said at least one user's mobility.

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However, Wallentin fails to explicitly show a base station controller configured to establish a preferred group of spreading codes and a non-preferred group of spreading codes.

In an analogous art (spreading channels in a CDMA communications system, col. 1, ln. 10), Kim discloses a device that establishes a preferred group of spreading codes (Walsh orthogonal code, col. 4, ln. 19) and a non-preferred group of spreading codes (quasi-orthogonal code, col. 4, ln. 19).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include a device that establishes a preferred group of spreading codes and a non-preferred group of spreading codes within a base station controller. The suggestion/motivation for doing so would have been to enable two users having different spreading rates to use the same spreading codes. Kim, col. 8, ln. 55-57. (See also CDMA systems increases channel capacity by using spread spectrum, Sourour (U.S. Pat No. 6,973,063), col. 2, ln. 28-20) Therefore, it would have been obvious to combine Kim with Wallentin for the benefit of a spreading device for a CDMA communication system that enables two users having different spreading rates to use the same spreading codes, to obtain the invention as specified in cl. 10.

7. **Claims 2,11,20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallentin and Kim as applied to claims 1,10,19 above, and further in view of Kansakoski et al. (U.S. Pat No. 6,377,813).

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With regard to cl. 2,11,20, the combination of Wallentin and Kim discloses a channel allocation method, a base station, and a method of managing channels in a CDMA communications system.

However, the combination fails to explicitly show determining the mobility of a user of a CDMA communications network comprises determining a Doppler frequency of a channel used by the user, as recited in cl. 2.

In an analogous art (wireless telecommunications mobile stations), Kansakoski discloses determining said mobility of said user of said CDMA communications network comprises determining a Doppler frequency of a channel used by said user (determine the Doppler condition and optionally, to estimate the velocity of the mobile station, col. 8, ln. 56-57).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include determining mobility of a user and a Doppler frequency of a channel used by the user. The suggestion/motivation for doing so would have been to provide for a rake receiver having a plurality of finger decorrelators for separately despreading a plurality of subchannels within the received communication signal using PN spreading code. Kansakoski, col. 8, ln. 49-52. Therefore, it would have been obvious to combine Kansakoski with the combination of Wallentin and Kim for the benefit of an estimation algorithm to each finger, to obtain the invention as specified in cl. 2,11,20.

***Allowable Subject Matter***

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8. Claims 3-9,12-18,21-23 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### **Conclusion**

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blanche Wong whose telephone number is 571-272-3177. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BW

BW  
February 17, 2006



**ALPUS H. HSU  
PRIMARY EXAMINER**